

CIRCUIT DESCRIPTION

CD-1A210-01
ISSUE 7D
APPENDIX 3D
DWG ISSUE 14D
DISTN CODE 1T99

ELECTRONIC SWITCHING SYSTEMS

COMMON

REMOTE MASTER SCANNER
APPLIQUE
CIRCUIT

FEB 25 1977

CHANGES

D. Description of Changes

- D.1 Changed the rating of option W from A&M Only to AT&TCO Standard for No. 3 ESS only. Option W remains A&M Only for all other systems.
- D.2 Added Circuit Note 111 which details the limited use of option W.
- D.3 Changed Circuit Note 104 and FS 1 to reflect the changes in D.1.
- D.4 Corrected a drawing error in Circuit Note 102.

BELL TELEPHONE LABORATORIES, INCORPORATED

DEPT 5317-GJS-GH

Printed in U.S.A.

Page 1
1 Page

CIRCUIT DESCRIPTION

CD-1A210-01
ISSUE 7D
APPENDIX 2D
DWG ISSUE 13D

FEB 18 1975

ELECTRONIC SWITCHING SYSTEMS

NO. 1, 1A, 2, OR NO. 3
ARRANGED WITH 2-WIRE FEATURES

REMOTE MASTER SCANNER
APPLIQUE CIRCUIT

CHANGES

D. Description of Changes

- D.1 Revised FS 1 to show the necessary connecting information for the application of this circuit into ESS No. 3.
- D.2 Corrected the lead index and Circuit Notes 102 and 104 on FS 1 and CAD 1 to reflect the changes in D.1.

BELL TELEPHONE LABORATORIES, INCORPORATED

DEPT 5317-GJS-GH



CIRCUIT DESCRIPTION

CD-1A210-01
ISSUE 7D
APPENDIX 1B
DWG ISSUE 12B

FEB 24 1975

ELECTRONIC SWITCHING SYSTEMS
NO. 1 CR NO. 2
ARRANGED WITH 2-WIRE FEATURES

REMOTE MASTER SCANNER
APPLIQUE CIRCUIT

CHANGES

B. Changes in Apparatus

B.1 Added

CR10 through CR15 (6) Diodes 446K -
App Fig. 1
CR20 through CR25 (6) Diodes 446K -
App Fig. 1

D. Description of Changes

D.1 Revised FS 1 to show the addition of battery isolating diodes, option R. The diodes will eliminate circulating currents between paralleled battery plants caused by potential differences.

D.2 The option index, Circuit Notes 102 and 104, and App Fig. 1 have been corrected to reflect the addition of the battery isolating diodes.

D.3 Added Circuit Note 110 and Equipment Note 204.

F. Changes in Description of Operation

F.1 In Section II, under 4. BATTERY AND GROUND FOR OUTSIDE ESS OFFICE, add:

(d) Option R when the circuit is part of a multiple monitoring a single signal source in conjunction with other collocated No. 1 ESS offices.

F.2 In Section II, under 6. PURPOSE OF COMPONENTS, add:

6.03 Diodes CR1 and CR2 (option R) are provided to eliminate circulating currents between multiplied No. 1 ESS offices resulting from battery potential differences.

BELL TELEPHONE LABORATORIES, INCORPORATED

DEPT 5317-GJS-GH

ELECTRONIC SWITCHING SYSTEMS

FEB 24 1975

NO. 1 OR NO. 2
ARRANGED WITH 2-WIRE FEATURESREMOTE MASTER SCANNER
APPLIQUE CIRCUITSECTION I - GENERAL DESCRIPTION1. PURPOSE OF CIRCUIT

1.01 The purpose of this circuit is to provide means to connect miscellaneous circuits outside the central office to the master scanner or universal trunk scanner circuit.

2. GENERAL METHOD OF OPERATION

2.01 Connecting circuits requiring the use of this circuit must connect on a loop basis and be capable of opening or closing the loop.

2.02 Battery and ground can be supplied by either the No. 1 ESS or by the transmission facility, but not both.

2.03 When battery and ground is supplied by No. 1 ESS, it can be supplied either by the master scanner circuit or by this circuit, but not both.

2.04 The remote master scanner applique circuit can be used for connecting circuits within the office.

SECTION II - DETAILED DESCRIPTION1. LOOP SIGNALS

1.01 Connecting circuits requiring the use of this circuit must supply an open or closed loop signal. An open loop provides no current; a closed loop produces current in the associated ferrod sensor control winding.

2. FERROD SENSOR

2.01 One ferrod sensor is associated with one applique circuit. The applique circuits are designated 0 through 7. There are eight circuits per unit.

3. MASTER SCANNER OR UNIVERSAL TRUNK SCANNER

3.01 The scanner circuit is under program control and reports the loop condition to the system.

4. BATTERY AND GROUND FACILITIES FOR OUTSIDE ESS OFFICE

4.01 Transmission facilities outside the central office should be compatible with one of the following options:

- (a) Option Y when battery and ground is provided at the scanner circuit
- (b) Option W when battery and ground is not provided at the scanner circuit or from the distant office
- (c) Option Z when battery and ground is provided by the distant office.

5. BATTERY AND GROUND FACILITIES FOR INSIDE THE ESS OFFICE

5.01 Connecting circuits within the office should be compatible with one of the following options:

- (a) Option W when battery and ground is not provided by the scanner circuit
- (b) Option Y when battery and ground is provided by the scanner circuit.

6. PURPOSE OF COMPONENTS

6.01 Resistors R1 and R2 limit the current and provide lightning protection and a balanced loop for each circuit.

6.02 Contact protection network CP reduces the peak voltage across the ferrod sensor for each circuit.



SECTION III - REFERENCE DATA1. WORKING LIMITS

1.01 Maximum external circuit
resistance is 6.8 kilohms. Minimum
insulation resistance is 30 kilohms.

1.02 Voltage limits:

Voltage	Minimum	Maximum
-48	42.75	52.5

(g) Toll Switchboard No. 1, 3, or 3C
Emergency Ringback Circuit -
SD-64244-01.

(h) Alarm Circuit - SD-81223-01.

(i) Power Systems - SD-81626-01.

(j) N2 Carrier Group Alarm Circuit -
SD-97118-01.

(k) N2 Carrier Group Alarm Circuit -
SD-97166-01.

2. FUNCTIONAL DESIGNATIONS

2.01 Associated Scanner Ferrod Sensors

Designation	Meaning
0 through 7	Ferrod sensors associated with this circuit are numerically designated for program reference.

3. FUNCTION

3.01 The basic function of this circuit
is to provide the facilities for connecting
miscellaneous circuits outside the central
office to the master scanner or universal
trunk scanner circuit.

4. CONNECTING CIRCUITS

4.01 When this circuit is listed on a
keysheet, the information thereon is to be
followed.

(a) Master Scanner Circuit -
SD-1A118-01.

(b) Miscellaneous Circuits for all
Frames
- SD-1A129-01.

(c) Master Scanner Circuit -
SD-1A209-01.

(d) Universal Trunk Scanner -
SD-2H161-01.

(e) Route Transfer and Make Busy
Circuits - SD-56048-01.

(f) Auxiliary Signal Circuit -
SD-63842-01.

5. MANUFACTURING TESTING REQUIREMENTSIntermediate Requirements

5.01 None.

End Requirements

5.02 This circuit should be tested to
verify that it is wired in accordance with
the schematic and wiring drawings, and that
the circuit is capable of performing all
functions stated in this circuit
discription.

6. ALARM SYSTEMS

6.01 This circuit has a single fuse to
the -48 volt supply in the bay fuse panel.
There is one fuse for every eight circuits
in a unit.

6.02 A blown fuse causes the FA relay
to operate an alarm. In No. 1 ESS the FA
relay is part of the miscellaneous circuit.
In No. 2 ESS the FA relay is part of the
trunk peripheral decoder circuit.

7. TAKING EQUIPMENT OUT OF SERVICE

7.01 Instructions for taking this
circuit out of service can be found in
BSP-231-130-301.

SECTION IV - REASONS FOR REISSUED. Description of Changes

D.1 Changed the CADs to provide means
by which this circuit and non-ESS frames,
in the same building, can be connected
directly.

D.2 Corrected CAD 1 to show the A, B
lead designations.

LL TELEPHONE LABORATORIES, INCORPORATED

DEPT 5723-GJS-GH

